

CU Student Recreation Center Swimming Pool is Powered by a MicroTurbine

How the MicroTurbine Works

A Capstone C30 MicroTurbine system was installed in the summer of 2004, to generate power and heat for the Recreation Center's pools.

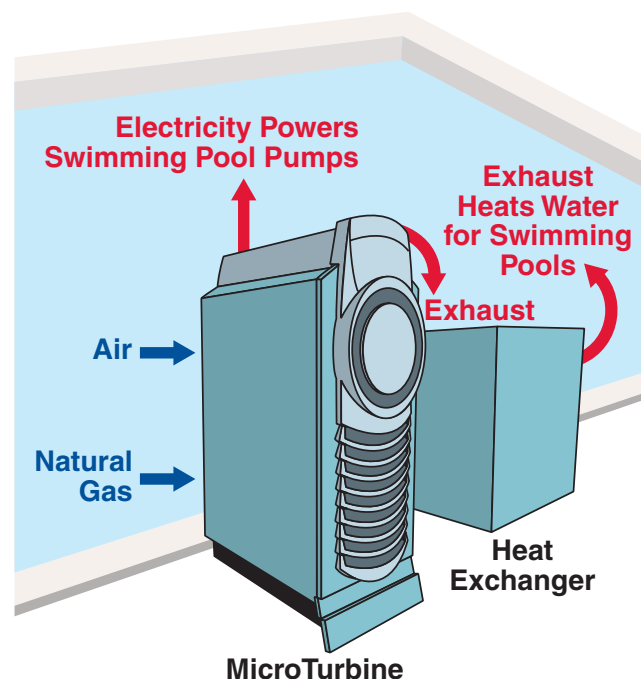
The microturbine is fueled by high-pressure natural gas, which powers the turbine engine.

Air heated from the microturbine is injected along with natural gas into the combustion chamber. Pressure from the continuous combustion process turns the turbine, which generates electricity.

The 530°F-heated oxygen-rich, near-zero-pollutant exhaust passes into the Heat Exchanger system, where it heats the water for the two swimming pools.

The electricity created from the microturbine is used to power the pumps for the swimming pools.

For more information, visit www.colorado.edu/conservation



MicroTurbine Characteristics

- Highly efficient co-generation of power and heat (up to 30 kW of power and 310,000 BTU/hour total exhaust energy)
- Ultra-clean emission NO_x <9 ppmV @ 15% O₂
- No hazardous fluids or materials
- Small footprint

This project was made possible by the Colorado Governor's Office of Energy Management and Conservation, University of Colorado Department of Facilities Management, University of Colorado Student Union, Tri-State Generation and Transmission Association, Inc., and Capstone Turbine Corporation.

